Today's proposal imposes only the statutory minimum components for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes. Based on the data reviewed below, the Agency believes that these facilities do not pose risks that would warrant more comprehensive facility standards.

1. Construction and Demolition Waste Facilities

The Agency analyzed existing leachate and ground-water monitoring data, and damage cases associated with construction and demolition waste management to assess potential risks associated with construction and demolition waste disposal facilities. Landfill leachate sampling data and ground-water monitoring data were collected from states and from general literature provided to the Agency by the National Association of Demolition Contractors (NADC).

a. Construction and Demolition Leachate. EPA evaluated representative construction and demolition waste leachate values (''Construction and Demolition Waste Landfills''). (This data was compiled by NADC). Leachate sampling data for 305 parameters sampled for at one or more of 21 construction and demolition landfills were compiled into a database.

Of the 305 parameters sampled for, 93 were detected at least once. The highest detected concentrations of these parameters were compared to regulatory or health-based ''benchmarks,'' or concern levels, identified for each parameter. Safe Drinking Water Act Maximum Contaminant Levels (MCLs) or Secondary Maximum Contaminant Levels (SMCLs) were used as the benchmarks if available. Otherwise, health-based benchmarks for a leachate ingestion scenario were identified; these were either reference doses (RfDs) for non-carcinogens, or 10^{-6} risk-specific doses (RSDs) for carcinogens. Benchmarks were unavailable for many parameters because they have not been studied sufficiently.

Of the 93 parameters detected in C&D landfill leachate, 25 had at least one measured value above the regulatory or health-based benchmark. For each of these 25 parameters, the median leachate concentration was calculated and compared to its benchmark. The median value was first calculated among the samples taken at each landfill, and then across all landfills at which the parameter was detected. Due to anomalies and inconsistencies among the sampling equipment used at different times and at different landfills, non-detects were not considered in determining median values; i.e., the non-detects were discarded before calculating both individual landfill concentration medians and medians across landfills. Thus, the median leachate concentrations represent the median among the detected values, rather than the median among all values. The median concentration among all values would in most cases have been lower than those calculated here.

Based on (1) the number of landfills at which the benchmark was exceeded and (2) a comparison between the median detected concentration and the benchmark, seven parameters emerge as being potentially problematic. The Agency identified this list of 7 potentially problematic parameters by eliminating from the original list of 25 parameters any parameter that was only detected at one landfill (this was determined to be not representative) and, furthermore, eliminating any parameter whose median concentration did not exceed the benchmark value for that parameter. The 7 potentially problematic parameters are as follows:

1,2-Dichloroethane
Methylene chloride
Cadmium
Iron
Lead
Manganese
Total dissolved solids

The benchmark values for three of the parameters (total dissolved solids, iron, and manganese) are secondary MCLs (SMCLs). Secondary MCLs are set to protect water supplies for aesthetic reasons, e.g., taste, rather than for health-based reasons. The remaining 4 constituents, their calculated medians, and health-based benchmark values are as follows:

Constituent	Median concentration	Health-based values	
		Value	Source
1,2-Dichloroethane	19 µg/l	5 µg/l	MCL.
Methylene chloride	15.2 µg/l	5 µg/l	10^{-6} RSD.
Cadmium	10.5 µg/l	5 µg/l	MCL.
Lead	55 µg/l	15 µg/l	Action level.

The next step in evaluating the significance of these constituent concentrations is to apply an exposure model to develop a relationship between the constituent concentration in the environment at an assumed exposure point and the constituent concentration in the waste. This is because constituents released from a waste undergo a variety of environmental fate and transport processes that result in exposure point concentrations that are lower than levels in the waste stream or in leachate.

The Agency assumed a dilution attenuation factor (DAF) of 100 for the fate and transport analysis. The value of 100 was selected based on the development of the Toxicity Characteristic (40 CFR 261.24). The DAF is an estimate of the factor by which the concentration is expected to decrease between the waste management facility and a hypothetical downgradient drinking water well. A multiplier of 100 corresponds to a cumulative frequency close to the 85th percentile from the EPACML simulations used to support the TC rule. In other words, in this exposure scenario, an estimated 15 percent of the drinking water wells closest to unlined municipal landfills could have contaminated concentrations above MCLs. Dividing the calculated median concentration by the DAF of 100 and comparing the new concentration allows for an estimate as to whether the new concentration will exceed the health-based value at an exposure point. In using the DAF of 100, the resulting new concentrations are all below their respective health-based values. The resulting concentrations as compared to the health-based values are presented in the table below.

Constituent	Median concentration divided by DAF of 100	Health-based value
1,2-Dichloro-ethane.	.19 µg/l	5 µg/l
Methylene chloride	.152 µg/l	5 µg/l
Cadmium	.105 µg/l	5 µg/l
Lead	.55 µg/l	15 µg/l

b. Construction and Demolition Damage Case Analysis. EPA conducted